

# Isaac Cheung

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## Education

### University of British Columbia

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Vancouver, BC

September 2018 - May 2022

- GPA: 3.9/4.0
- Graduated With Distinction
- Dean's Honour List

## Experience

### Google

Sunnyvale, CA

SOFTWARE ENGINEER

August 2022 - Present

- Designed and implemented native database filtering to improve the load time of the admin page, in addition to laying the groundwork for future scalability efforts. Done using Java.
- Conducted in-depth assessments to evaluate the feasibility of native database filtering and additional indexing to the schema for performance optimization.
- Conducted successful dark launches to verify correctness and reliability of the native database filtering implementation, ensuring a seamless user experience.

### Amazon Web Services (AWS)

Remote | Palo Alto, CA

SOFTWARE DEVELOPMENT ENGINEER INTERN

February 2021 - August 2021

- Designed and implemented remote server execution support via VMware APIs. Done using Java and Golang.
- Integrated the AWS Schema Conversion Tool into existing service API workflow using Java and Docker, allowing the generation of recommendations for database migrations on the cloud.
- Leveraged numerous AWS services to streamline development, such as S3, DynamoDB, Lambda, API Gateway, Secrets Manager, Cloud Watch, and Cloud Formation.
- Led all testing for the features that I worked on, including unit tests, integration tests, and end-to-end tests.

### Amazon Web Services (AWS)

Remote | Palo Alto, CA

SOFTWARE DEVELOPMENT ENGINEER INTERN

May 2020 - September 2020

- Reduced the Server Migration Service's console load time latency by over 60% through various API optimizations, such as leveraging global secondary indexes in DynamoDB to improve filtering. Done using Java.
- Increased the region build automation's coverage from 60% to 90% and removed deprecated dependencies through a refactoring of the team's automated region build code using an internal framework in Ruby.

### BGC Engineering

Vancouver, BC

WEB & MOBILE DEVELOPMENT INTERN

January 2020 - May 2020

- Added functionality to the map identify tool, enabling the tool to select polygon geometry based target objects using TypeScript.
- Solved numerous concurrency issues related to the web form logic used by 1000+ engineers daily.
- Created new React web form and web form components to support 1000+ engineers in the field daily, enabling them to electronically document inspections and remotely sync the data on various hazard sites.

## Projects

### Distributed Chat System

Technologies used: Golang, Cobra, TUI

April 2022

- Developed a distributed chat system, connecting users and allowing them to communicate with each other using a client interface.
- Designed the system for fault tolerance using primary-backup replication, allowing it to survive multiple server failures.
- Implemented round robin style load balancing to fairly distribute clients across all servers.

## Skills

Languages	Python, Java, C, C++, C#, Golang, TypeScript, JavaScript, Ruby, SQL, NoSQL, Haskell
Libraries/Frameworks	React.js, Express.js, Three.js, Swing, Cobra
Testing	JUnit, Mockito, PowerMock, Mocha
Other Technologies	HTML, CSS, Git, Node.js, AWS, Heroku, Docker